REMARKS

In response to the above-identified Office Action, Claims 1, 3-5, 8, 9, 11-13, 16, 17, 19–21, 24-26 and 28-31 are amended, Claims 32-43 are cancelled and no claims are added. Accordingly, Claims 1-31 are pending. Reconsideration and withdrawal of the rejections of record are requested in view of such amendments and the following discussion.

I.   Claim Rejections Under 35 U.S.C. §103

The Examiner has rejected Claims 1, 6-9, 14-17, 22-25, 27-33 and 38-39 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,074,905 issued to Herman ("Herman"). Applicant respectfully traverses this rejection.

Regarding Claim 1, as amended, includes the following claim feature, which is neither taught nor suggested by either Herman or the references of record:

> retrieving, subsequent to said purging, overlapping areas of the at least two digital images at a second resolution level higher than the first resolution level based on the first overlap information. (Emphasis added.)

However, according to the Examiner, dividing of the at least two digital images into a plurality of areas is taught by Herman at col. 9, lines 3-13 and 21-25. After careful review of the cited passages, the cited passages describe an iterative refinement for alignment of source images in order to achieve a new method taught by Herman, which teaches:

> finding a geometric transformation, which when applied to each of the source images, results in a global best match for all source images. (See col. 8, lines 22-24.) (Emphasis added.)

According to Herman:

> Using this method, adjustments are first computed for low resolution representations of the submosaics. This improves the large scale alignment of the overall mosaic and the submosaics are decomposed into smaller submosaics, and the adjustments are repeated for these, typically at higher image resolution . . . These divide and align steps are repeated until a desired precision and image resolution is achieved, possibly at the level of individual source image. (See col. 9, lines 3-13.) (Emphasis added.)

In contrast to the divide and conquer technique described by Herman, Claim 1 requires the retrieval of overlapping areas of the at least two digital images at a second resolution level higher than the first resolution based on first overlap information. This retrieval of the overlapping areas is not taught nor suggested by the divide and conquer technique described by Herman. Furthermore, once retrieval of the overlapping areas is performed, Claim 1, as amended, further requires the following claim feature, which is also neither taught nor suggested by Herman:

> identifying second overlap information regarding where overlapping ones of the retrieved overlapping areas overlap at the second resolution level.

Applicant respectfully submits that the retrieval of overlapping areas and the identification of overlapping area information are not taught by the decomposition of submosaics into smaller

submosaics and the repeating of adjustments typically at higher resolution levels, as taught by Herman. Furthermore, after careful review of the entire specification of Herman, Applicant fails to discover any teaching or suggestion within Herman regarding retrieval of overlapping areas on identification of second overlap information regarding where overlapping ones of the areas overlap at the second resolution area. Thus, the global alignment transformations as taught by Herman do not teach or suggest the above-described features of Claim 1, as amended.

Accordingly, Applicant respectfully submits that Applicant's amendment of Claim 1 prohibits the Examiner from establishing a *prima facie* case of obviousness to render Claim 1 unpatentable over Herman. Applicant submits that this failure is due to the fact that the retrieving of the overlapping areas and the identifying of the second overlap information of Claim 1 are neither taught nor suggested by Herman.

Moreover, the Examiner correctly notes that Herman does not specifically mention purging the memory subsequent to said identifying of the at least two digital images as the first resolution level, as required by Claim 1. However, according to the Examiner, it would have been obvious to one skilled of ordinary skill in the art at the time the invention was made to purge the images because it is well known to purge memory of items when they are no longer needed to free up the memory. However, in the procedure described by Herman, adjustments are first computed for low level resolution representations of the submosaics, then the submosaics are decomposed into smaller submosaics. (*See* col. 9, lines 4-6.)

Based on this passage, Applicant respectfully submits that in order to anticipate Claim 1, the Examiner would have to find some teaching or suggestion for purging the low resolution representations of the submosaics prior to the decomposing of the submosaics into smaller submosaics. However, it is unclear how a submosaic could be decomposed into smaller submosaics when the initial submosaic is purged from memory, as required by Claim 1. Hence, Applicant respectfully submits that the Examiner has engaged in an improper hindsight based analysis in order to show obviousness of Applicant's claimed feature of purging memory subsequent to said identifying of first overlap information regarding where the at least two digital images overlap at the first resolution level.

Therefore, Applicant respectfully submits that the Examiner fails to establish a *prima facie* case of obviousness of Claim 1, as amended, over Herman since Herman fails to teach the purging of memory, the retrieving of overlapping areas and the identifying of second overlap information, as required by Claim 1, as amended. The Applicant's failure is due to the fact that a *prima facie* case of anticipation requires the teaching of each and every claim feature by the combination of references. Since the claim features indicated above are not taught by Herman or the references of record, Applicant respectfully submits that Claim 1, as amended, is patentable over Herman, as

well as the references of record. Consequently, Applicant respectfully requests that the Examiner reconsider and withdraw the §103(a) rejection of Claim 1.

Regarding Claims 6-8 and 28, Claims 6-8 and 28 depend from Claim 1, and therefore include the patentable claim features of Claim 1, as described above. Accordingly, for at least the reasons described above, Applicant respectfully submits that Claims 6-8 and 28 are patentable over Herman, as well as the references of record. Consequently, Applicant respectfully requests that the Examiner reconsider and withdraw the §103(a) rejection of Claims 6-8 and 28.

Regarding Claim 9, Claim 9, as amended, includes analogous claim features, as described above with reference to Claim 1. Specifically, Claim 9 includes a memory purging feature, a retrieval of overlapping areas feature and an identifying of second overlap information feature of Claim 1. As indicated above, Herman does not teach retrieval of overlapping areas and also does not teach identification of second overlap information, as required by Claim 9. Such features are not taught by the divide and align steps, as described by Herman. (*See* col. 9, lines 3–13.)

Furthermore, as indicated above, Herman does not teach a memory purging step, as required by Claim 9. Applicant submits that purging of the low resolution representation of the submosaics would prohibit the decomposition taught by Herman. Accordingly, Applicant respectfully submit that the Examiner cannot establish a *prima facie* case of obviousness to reject Claim 9, as amended, since Herman does not teach all claim features of Claim 9, as amended. Consequently, Applicant respectfully submits that Claim 9, as amended, is patentable over the references of record. Therefore, Applicant respectfully requests that the Examiner reconsider and withdraw the §103(a) rejection of Claim 9.

Regarding Claims 14-16 and 29, Claims 14-16 and 29 depend from Claim 9 and therefore include the patentable claim features of Claim 9, as described above. Consequently, Applicant respectfully requests that the Examiner reconsider and withdraw the §103(a) rejection of Claims 14-16 and 29.

Regarding Claim 17, Claim 17 also includes the purging, retrieving and identifying claim features, as described above with reference to Claim 1. As indicated above, the iterative refinement techniques taught by Herman fail to teach retrieval of overlapping areas and identification of second overlap information regarding where the overlapping areas overlap, as required by Claim 17, as amended.

Moreover, Applicant respectfully submits that it would not be obvious to one of ordinary skill in the art to purge memory of the at least two digital images subsequent to the identifying of first overlap information, as required by Claim 17. Consequently, Applicant respectfully submits that the Examiner is prohibited from establishing a *prima facie* case of obviousness of Claim 17 over Herman since Herman, combined with the skill in the art or any of the references of record, fail to teach all claim features of Claim 17, as amended. Accordingly, Applicant respectfully

submit that Claim 17, as amended, is patentable over <u>Herman</u>, as well as the references of record. Consequently, Applicant respectfully requests that the Examiner reconsider and withdraw the §103(a) rejection of Claim 17.

Regarding Claims 22-24 and 30, Claims 22-24 and 30 depend from Claim 17, and therefore include the patentable claim features of Claim 17. Accordingly, for at least the reasons described above, Claims 22-24 and 30 are also patentable over <u>Herman</u> as well as the references of record. Consequently, Applicant respectfully requests that the Examiner reconsider and withdraw the §103(a) rejection of Claims 22-24 and 30.

Regarding Claim 25, Claim 25 includes the following claim features, which are neither taught nor suggested by either <u>Herman</u> or the references of record:

> means for retrieving, subsequent to said purging, overlapping areas of the at least two digital images at a second resolution level higher than the first resolution level based on the overlapping portion information; and

> means for identifying second overlap information regarding where overlapping ones of the retrieved overlapping areas at the second resolution level overlap.

As indicated above with reference to Claim 1, the iterative refinement technique, as taught by <u>Herman</u>, repeats decomposition of said mosaics into smaller submosaics and the computation of adjustments are repeated for the smaller submosaics typically at a higher resolution level. This iterative refinement does not teach retrieval of overlapping areas and identification of second overlap area information regarding where these overlapping areas overlap. Furthermore, as correctly indicated by the Examiner, <u>Herman</u> does not teach means for purging memory of the at least two digital images at the first resolution level subsequent to said identifying.

Accordingly, Applicant respectfully submits that the Examiner is prohibited from establishing a *prima facie* case of anticipation or of obvious of Claim 25, as amended, since neither <u>Herman</u> nor the references of record teach means for purging, means for retrieving and means for identifying, as required by Claim 25, as amended. Accordingly, Applicant respectfully submits that Claim 25, as amended, is patentable over <u>Herman</u>, as well as the references of record. Consequently, Applicant respectfully requests that the Examiner reconsider and withdraw the §103(a) rejection of Claim 25, as amended.

Regarding Claim 31, Claim 31 depends from Claim 25 and therefore include the patentable claim features of Claim 25, as described above. Accordingly, Claim 31, for at least the reasons described above, is also patentable over <u>Herman</u>, as well as the references of record. Consequently, Applicant respectfully requests that the Examiner reconsider and withdraw the §103(a) rejection of Claim 31.

The Examiner has rejected Claims 2-5, 10-13, 18-21, 26, 34-37 and 40-43 under 35 U.S.C. §103(a) as being unpatentable over Herman in view of Mann. Applicant respectfully traverses this rejection.

Regarding Claims 2-5, Claims 2-5 depend from Claim 1, and therefore include the patentable features of Claim 1, as described above. Applicant respectfully submits that careful review of Mann illustrates that Mann fails to rectify the deficiencies attributed to Herman's failure to teach the claim features of Claim 1, as amended, including purging of the memory, retrieving of overlapping areas and identifying of second overlap information, as required by Claim 1, as amended. Accordingly, Applicant respectfully submits that Claims 2-5, for at least the reasons described above, are patentable over Herman, Mann and the references of record. Consequently, Applicant respectfully requests that the Examiner reconsider and withdraw the §103(a) rejection of Claim 2-5.

Regarding Claims 10-13, Claims 10-13 depend from Claim 9, and therefore include the patentable claim features of Claim 9, as described above. With regard to the Examiner's citing of Mann, Applicant respectfully submits that Mann fails to rectify the deficiencies attributed to Herman's failure to teach or suggest the claim feature of Claim 9, as amended, requiring purging of the memory, retrieving of overlapping areas and identification of overlapping area information. Accordingly, for at least the reasons described above, Applicant respectfully submits that Claims 10–13, based on their dependency from Claim 9, are also patentable over Herman, Mann and the references of record. Consequently, Applicants respectfully requests that the Examiner reconsider and withdraw the §103(a) rejection of Claims 10-13.

Regarding Claims 18-21, Claims 18-21 depend from Claim 17 and therefore include the patentable claim features of Claim 17, as described above. With regard to the Examiner's citing of Mann, Applicant respectfully submits that the teachings of Mann fail to rectify the deficiencies of Herman in failing to teach or suggest the claim features of purging the memory of the at least two digital images, retrieving of the overlapping areas and identification of second overlap area information, as required by Claim 17, as amended. Accordingly, Applicant respectfully submits that Claims 18-21, based on their dependency from Claim 17, are also patentable over Herman, Mann and the references of record. Consequently, Applicant respectfully requests that the Examiner reconsider and withdraw the §103(a) rejection of Claims 18-21.

Regarding Claim 26, Claim 26 depends from Claim 25, and therefore includes the patentable claim features of Claim 25, as described above. Furthermore, Applicant respectfully submits that the Examiner's citing of Mann fails to rectify the deficiencies attributed to Herman in failing to teach means for purging memory, means for retrieving the overlapping areas and means for identifying second overlap information, as required by Claim 25, as amended. Consequently, Applicant respectfully submits that Claim 26, based on its dependency from Claim 25, is also

patentable over <u>Herman</u>, <u>Mann</u> and the references of record. Consequently, Applicant respectfully requests that the Examiner reconsider and withdraw the §103(a) rejection of Claim 26.

CONCLUSION

Applicant has amended the claims to recite features that are not taught or suggested by the references. No new matter is introduced by the Applicant's claim amendments, which are supported in Applicant's specification and are necessary for placing the present application in condition for allowance.

In view of the foregoing, it is believed that all claims now pending, namely Claims 1-31 patentably define the present application over the prior art of record, and are therefore in condition for allowance; and such action is earnestly solicited at the earliest possible date. If the Examiner believes that a telephone conference would be useful in moving the application forward to allowance, the Examiner is encouraged to contact the undersigned at (310) 207-3800, ext. 738

Respectfully submitted,

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Date: <u>October 28, 2003</u>   By: _____
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Marilyn Bass   October 28, 2003